Shp 01/04

# Work Order ID 67749

*Wednesday, March 30, 2011 8:57:19 AM*



**Item ID:** D3199-3 **Accept** **Setup Start** **Stop**

**Revision ID:**

**Item Name:** Bracket, Fwd LH

**Start Date:** 3/30/2011 **Start Qty:** 1.00 **Cust Item ID:**

**Required Date:** 3/31/2011 **Req'd Qty:** 1.00 **Customer:**

**Reference:**

**Approvals:** **Process Plan:** H **Date:** 11-08-30 **Tooling:** _____ **Date:** _____ **Run Start** **Stop**

**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| **Draw Nbr** D3199 **Revision Nbr** C D ECN 11-531 | | | | | | | | | |
| 100 | FLOW WATER JET | 0.00 | | | | | | | |
| Waterjet | **Memo** | 0.00 | | | | HB 11-3-30 | | | |
| FLOW CNC Waterjet | Cut as per Dwg D3199 | | | | | | | | |
| 304.040 | Dwg Rev: D | | | | | | | | 6 |
| | Prog Rev: D | | | | | | | | |
| | Deburr if required | | | | | | | | |
| 110 | QC2- Inspect parts off machine FAI/FAIB | 0.00 | | | | | | | |
| QC | **Memo** | 0.00 | | | | HB 11-3-30 | | | |
| Quality Control | | | | | | | | | |

**Dart Aerospace Ltd**

| W/O: | | WORK ORDER CHANGES | | | | | |
|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **PROCEDURE CHANGE** | **By** | **Date** | **Qty** | **Approval** Chief Eng / Prod Mgr | **Approval** QC Inspector |
| | | | | | | | |
| | | | | | | | |

**Part No:** _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

**Resolution:** _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | **Corrective Action** Section B | | | | | |
| **DATE** | **STEP** | **Description of NC** Section A | **Initial** Chief Eng | **Action Description** Chief Eng | **Sign & Date** | **Verification** Section C | **Approval** Chief Eng | **Approval** QC Inspector |
| | | | | | | | | |
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**NOTE:** Date & initial all entries

H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

# Work Order ID 67749

*Wednesday, March 30, 2011 8:57:19 AM*

**Item ID:** D3199-3 **Accept** **Setup Start** **Stop**

**Revision ID:**

**Item Name:** Bracket, Fwd LH

**Start Date:** 3/30/2011 **Start Qty:** 1.00 **Cust Item ID:**

**Required Date:** 3/31/2011 **Req'd Qty:** 1.00 **Customer:**

**Reference:**

**Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Run Start** **Stop**

**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| 120 QC Quality Control | QC8- Inspect parts - second check<br>**Memo** | 0.00 - inspector to Rev D (un releases Dwg only)<br>0.00 8 11/03/30 (+C) | | | | | | | |
| 130 Brake NC Brake NC | Bend as per dwg<br>Small Fab<br>**Memo** | 0.00<br>0.00 SB 11/03/31 | | | | (1) | | | |
| 140 QC Quality Control | QC5- Inspect part completeness to step on W/O<br>**Memo** | 0.00 - inspector to unapproved Rev D Dwg.<br>0.00 8 11/03/31 (+C) | | | | | | | |

**Dart Aerospace Ltd**

| W/O: | | WORK ORDER CHANGES | | | | | |
|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **PROCEDURE CHANGE** | **By** | **Date** | **Qty** | **Approval** Chief Eng / Prod Mgr | **Approval** QC Inspector |
| | | | | | | | |
| | | | | | | | |

**Part No:** _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

**Resolution:** _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **Description of NC** Section A | **Corrective Action** Section B | | | **Verification** Section C | **Approval** Chief Eng | **Approval** QC Inspector |
| | | | **Initial** Chief Eng | **Action Description** Chief Eng | **Sign & Date** | | | |
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**NOTE:** Date & initial all entries

# Work Order ID 67749

*Wednesday, March 30, 2011 8:57:19 AM*



**Item ID:** D3199-3 **Accept** **Setup Start** **Stop**

**Revision ID:**

**Item Name:** Bracket, Fwd LH

**Start Date:** 3/30/2011 **Start Qty:** 1.00 **Cust Item ID:**

**Required Date:** 3/31/2011 **Req'd Qty:** 1.00 **Customer:**

**Reference:**

**Run Start** **Stop**

**Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| 145 Small Fab | | 0.00 | | | | | | | |
| Small Fab | **Memo** ROLL AS PER DWG | 0.00 | | | | | | | |
| 147 QC | QC5- Inspect part completeness to step on W/O | 0.00 | | | | | | | |
| Quality Control | **Memo** | 0.00 | | | | | | | |
| 150 Powdercoat | Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3 | 0.00 | | | | 1 | BR | 11-3-31 | |
| Powder Coating | **Memo** START TIME: 8:35 OVEN TEMPERATURE: 320° FINISH TIME: 9:05 | 0.00 | | | | | | | |

115128

**Dart Aerospace Ltd**

| W/O: | | WORK ORDER CHANGES | | | | | |
|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **PROCEDURE CHANGE** | **By** | **Date** | **Qty** | **Approval** Chief Eng / Prod Mgr | **Approval** QC Inspector |
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| | | | | | | | |

**Part No:** _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

**Resolution:** _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **Description of NC** Section A | **Corrective Action** Section B | | | **Verification** Section C | **Approval** Chief Eng | **Approval** QC Inspector |
| | | | **Initial** Chief Eng | **Action Description** Chief Eng | **Sign & Date** | | | |
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**NOTE:** Date & initial all entries

# Work Order ID 67749

*Wednesday, March 30, 2011 8:57:19 AM*



**Item ID:** D3199-3 **Accept** **Setup Start**

**Revision ID:** **Stop**

**Item Name:** Bracket, Fwd LH

**Start Date:** 3/30/2011 **Start Qty:** 1.00 **Cust Item ID:**

**Required Date:** 3/31/2011 **Req'd Qty:** 1.00 **Customer:**

**Reference:**

**Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Run Start**

**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop**

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| 160 | QC3- Inspect Part Finish | 0.00 | | | | 1 | 0 | | 11/03/31 |
| QC | **Memo** | 0.00 | | | | | | | |
| Quality Control | | | | | | | | | |
| 170 | Identify as per dwg & Stock Location: SF 236A | 0.00 | | | | | | | 11/3/31 |
| Packaging | **Memo** | 0.00 | | | | | | | |
| Packaging | | | | | | | | | |
| 180 | QC21- Final Inspection - Work Order Release | 0.00 | | | | | | | 11/3/31 |
| QC | **Memo** | 0.00 | | | | | | | |
| Quality Control | | | | | | | | | |

11-03-31

**Dart Aerospace Ltd**

| W/O: | | WORK ORDER CHANGES | | | | | |
|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **PROCEDURE CHANGE** | **By** | **Date** | **Qty** | **Approval** Chief Eng / Prod Mgr | **Approval** QC Inspector |
| | | | | | | | |
| | | | | | | | |

**Part No:** _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

**Resolution:** _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **Description of NC** Section A | **Corrective Action** Section B | | | **Verification** Section C | **Approval** Chief Eng | **Approval** QC Inspector |
| | | | **Initial** Chief Eng | **Action Description** Chief Eng | **Sign & Date** | | | |
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| | | | | | | | | |

**NOTE:** Date & initial all entries

# Picklist Print

*Wednesday, March 30, 2011 8:57:25 AM*



**Work Order ID:** 67749

**Parent Item:** D3199-3

**Parent Item Name:** Bracket, Fwd LH

**Start Date:** 3/30/2011 **Required Date:** 3/31/2011

**Start Qty:** 1.00 **Required Qty:** 1.00

**Comments:** IPP RevA: RevC-prelim DD verified by:EC

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M304S20GA<br>304/316 .040 Sheet | | Purchased | No | | | 100 | sf | 109.0000 | 0.3371 | 0.354842<br>IB 11-3-30 | | | |

| Location | Loc Qty | Loc Code |
|---|---|---|
| MAT020 | 109 | |
| 115953 | 1 | |
| 116437 | 44 | |
| 116623 | 64 | |

115953

1

**Dart Aerospace Ltd**

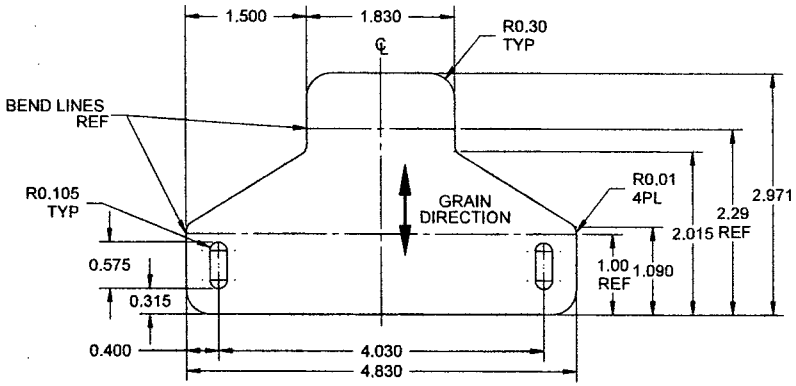
| W/O: | | WORK ORDER CHANGES | | | | | |
|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **PROCEDURE CHANGE** | **By** | **Date** | **Qty** | **Approval** Chief Eng / Prod Mgr | **Approval** QC Inspector |
| | | | | | | | |
| | | | | | | | |

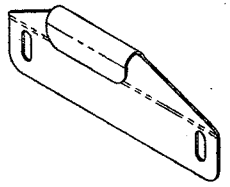
**Part No:** _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

**Resolution:** _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

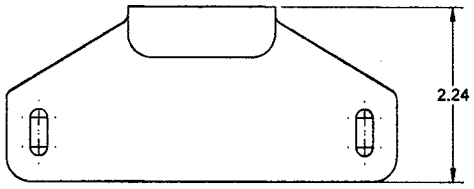
| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **Description of NC** Section A | **Corrective Action** Section B | | | **Verification** Section C | **Approval** Chief Eng | **Approval** QC Inspector |
| | | | **Initial** Chief Eng | **Action Description** Chief Eng | **Sign & Date** | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

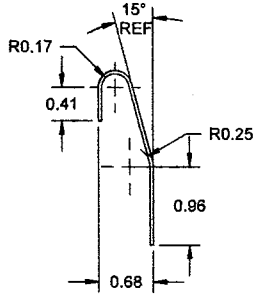
**NOTE:** Date & initial all entries



**D3199-1F FLAT PATTERN**




**D3199-1 BRACKET**
MADE FROM D3199-1F

NOTES:
1) MATERIAL: AISI 304/316 SS SHEET, 0.040 THICK, ANNEALED, 2B FINISH
PER MIL-S-5059, OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240
REF DART SPEC M304S20GA
2) FINISH: POWDER COAT "GREY SANDTEX" (4.3.5.6) PER DART QSI 005 4.3
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFICATION: IDENTIFY WITH DART P/N "D3199-X" AND B/N "BXXXXX" PER QSI 044 6.1
7) WEIGHT: D3199-1 = 0.11 lbs, D3199-3/-4 = 0.26 lbs EACH

| REV. | DESCRIPTION | BY | DATE |
|---|---|---|---|
| D | RE-DESIGNED D3199-3/-4/-3F PER CUSTOMER FEEDBACK TO ELIMINATE BINDING OF DOOR ONCE BRACKETS ARE INSTALLED. REF.: PAR11-78 | MB | 11.03.21 |
| C | ADD -3/-4 PART (SHEET 2-4) | HS | 09.11.19 |
| B | 2.24 WAS 2.142; ADD FINISH; UPDATE DWG | CB | 06.11.01 |
| A | NEW ISSUE | CP | 03.08.05 |

| | | |
|---|---|---|
| DESIGN | | DART AEROSPACE LTD |
| DRAWN | | HAWKESBURY, ONTARIO, CANADA |
| CHECKED | | DRAWING NO. D3199 REV. D |
| MFG. APPR. | | SHEET 1 OF 4 |
| APPROVED | | TITLE BRACKET SCALE NTS |
| DE APPR. | | |
| DATE | 11.03.21 | |

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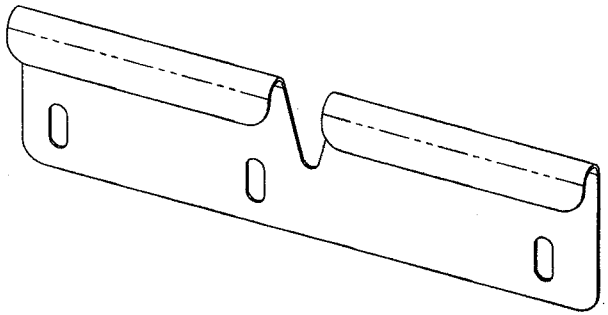

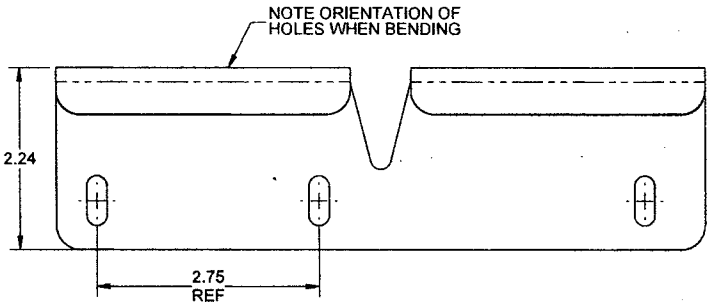


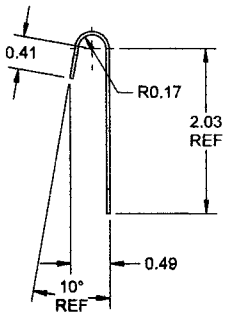


**D3199-3 BRACKET**
(D) MADE FROM D3199-3F

| | | |
|---|---|---|
| DESIGN | | **DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA |
| DRAWN | | |
| CHECKED | AJS | DRAWING NO. D3199 REV. D |
| MFG. APPR. | D | SHEET 2 OF 4 |
| APPROVED | MD | TITLE BRACKET SCALE NTS |
| DE APPR. | | |
| DATE 11.03.21 | | |

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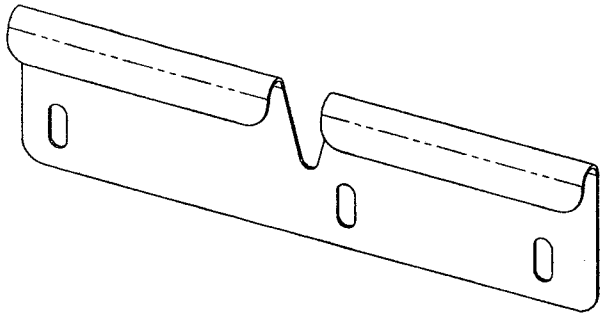

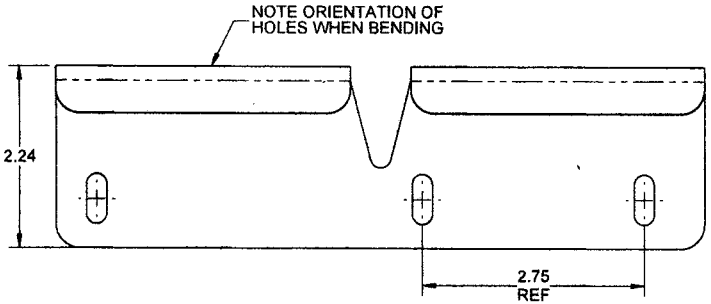


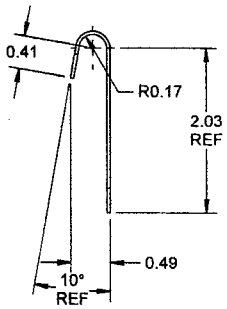


**△D D3199-4 BRACKET**
MADE FROM D3199-3F

| | | |
|---|---|---|
| DESIGN | | **DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA |
| DRAWN | | |
| CHECKED | AJS | DRAWING NO. D3199 REV. D |
| MFG. APPR. | | SHEET 3 OF 4 |
| APPROVED | | TITLE BRACKET SCALE NTS |
| DE APPR. | | |
| DATE 11.03.21 | | |

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| DART AEROSPACE LTD | Work Order: | 67749 |
|---|---|---|
| Description: BRACKET FWD LH | Part Number: | D3199-3 |
| Inspection Dwg: D3199-3 , Rev: D | | Page 1 of 1 |

## FIRST ARTICLE INSPECTION CHECKLIST

[X] First Article [X] Prototype

| Drawing Dimension | Tolerance | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|---|---|---|---|---|---|---|
| .615 | ± .010 | .616 | X | | V HB02 | |
| .500 | ± .010 | .500 | X | | V | |
| 2.750 | ± .010 | 2.751 | X | | V | |
| 4.036 | ± .010 | 4.037 | X | | V | |
| 8.030 | ± .010 | 8.037 | X | | V | |
| .990 | ± .010 | .992 | X | | V | |
| 3.00 | ± .030 | 3.006 | X | | V | |
| ~~3.56~~ | ± .030 | | | | | |
| ~~3.88~~ | ± .030 | | | | | |
| ~~3.78~~ | ± .030 | | | | | |
| .295 | ± .010 | .297 | X | | V | |
| .040 | ± .010 | .037 | X | | V | |
| 3.64 | ± .036 | 3.633 | X | | V | |
| 4.02 | ± .030 | 4.015 | X | | V | |

| Measured by: | | Audited by: | | Prototype Approval: | |
|---|---|---|---|---|---|
| Date: | 11-3-30 | Date: | 11/03/30 | Date: | |

to Rev D Dwg only

| Rev | Date | Change | Revised by | Approved |
|---|---|---|---|---|
| A | | New Issue | KJ/JLM | |

| DART AEROSPACE LTD | Work Order: | 67745 |
|---|---|---|
| | | |
| Description: Bracket | Part Number: | D3195-3 |
| | | |
| Inspection Dwg: D3195 Rev: D | | Page 1 of 1 |

## FIRST ARTICLE INSPECTION CHECKLIST

[X] First Article [ ] Prototype

| Drawing Dimension | Tolerance | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|---|---|---|---|---|---|---|
| 2.24" | ±.030 | 2.24"/2.26" | – | | vern ED-00526 | |
| 2.75" (Ref) | ±.030 | 2.75" | – | | vern ED-00526 | |
| | | | | | | |
| 0.41" | ±.030 | 0.41" | – | | vern ED-00526 | |
| 2.03" | ±.030 | 2.03" | – | | vern ED-00526 | |
| 0.49" | ±.030 | 0.497 | ✓ | | vern ED-00526 | |
| 10° (Ref) | ±1/2° | 10° | ✓ | | Bevel Protractor EDC526 | |
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| Measured by: | | Audited by: | | Prototype Approval: | N/A |
|---|---|---|---|---|---|
| Date: | 11/03/31 | Date: | 11/03/31 | Date: | N/A |

| Rev | Date | Change | Revised by | Approved |
|---|---|---|---|---|
| A | | New Issue to un Approved Rev D Dwg. | KJ/JLM | |